

Submission of Samples to the Iowa State University Veterinary Diagnostic Laboratory for Rabies Examination

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Rabies Testing at the ISU VDL

- Much of the rabies testing conducted at the ISU VDL is done in the context of diagnostic work-ups directed toward determining the cause of illness in the animal submitted for examination
- As with other cases submitted to the VDL, examinations are conducted at the request of a submitting veterinarian and fees are assessed for tests conducted

Rabies Testing at the ISU VDL

- Submissions for rabies examination only can be made under the name of a physician or other responsible public health officer to whom results can be reported
- Owner will be responsible for assessed fees (payable upon submission)

Rabies Cases

- Human-exposure cases
 - Purpose of testing is to determine risk of infection to human exposed to rabies suspect animal
- Non-human-exposure cases
 - Purpose of testing is to identify or rule out rabies as the cause of illness (usually CNS signs)
 - Additional testing can be conducted if rabies tests are negative

ISU VDL Contact Information

- Information, rabies submission forms, and the location of the laboratory can be found on the ISU VDL Website:

www.vetmed.iastate.edu/departments/vdpam/vdl/userguide/virology/

ISU VDL Contact Information

- VDL Address:
Veterinary Diagnostic Laboratory
Iowa State University
1600 So. 16th St., Ames, IA 50011
- VDL Telephone: (515) 294-1950
- VDL Submission Fax: (515) 294-6961

Consultation on Submissions

- Kyoung-Jin Yoon, DVM, PhD
Virology Section Leader
Daytime: (515) 294-1950
After hours cell phone: (515) 290-0049
- Pathologist on duty
Daytime: (515) 294-1950
After hours cell phone: (515) 291-3193

Testing Schedule

- Weekday schedule
 - Same day if received before 11 am
 - After 12 pm, test will be run next business day
- Weekend/after hours schedule
 - No tests conducted evenings or weekends
 - Weekend/ after hours coverage provided by Iowa Hygienic Lab

Case Submission

- Samples can be dropped off at the submission desk weekdays 8 am – 5pm
- After hours and weekends, samples can be dropped off at the Small Animal desk (Emergency staff: 515-294-1500) or by calling VDL student aides: 515-290-1969
- Samples also can be delivered by commercial carrier; double watertight packaging inside sturdy outer container with submission form and cold packs

Samples to Submit

- Intact entire brain is needed for optimum analysis
- Brain alone is sufficient if care can be taken on removal
- Intact head is preferable if brain removal is difficult (e.g. bats)
- Entire animal is preferable if other testing to determine cause of illness may be desired

Samples to Submit

- Brain
 - ½ fresh (chilled, not frozen)
 - ½ formalin- fixed
- Intact head
- Entire body (dead)
- Animals should be euthanized before submission if at all possible to minimize number of people potentially exposed

Live Rabies Suspects

- Dogs, cats, horses (and wildlife if possible) should be euthanized before submission
- Small wildlife (and dogs/cats if absolutely necessary) if submitted alive must be in a cage or portable kennel; euthanasia fee will be charged
- Livestock can be submitted alive if necessary (handling facilities available)

Results Reporting

- Positive results will be called out to the submitting veterinarian by the technician responsible for the test as soon as the test is completed
- Negative results also called out same day by clerical staff; letter to follow
- Phone number needed that will be answered by a person (not answering machine/voice mail)

Test Results

- Positive: Rabies virus detected in at least one of the samples examined
- Negative: No rabies virus detected, all necessary sample sites presented, and tissue quality acceptable
- Inconclusive: No rabies virus detected, but not all desired sample sites received, or tissue quality questionable
- No test: No brain tissue received in condition that could be tested

Brain samples

- Brain must be intact; three areas are tested (hippocampus, cerebellum, brain stem)
- Brain stem and cerebellum are critical (most often left in the skull or damaged on removal)
- Decomposition does interfere with test results; a reliable test may not be possible

Test Procedures

- Fluorescent antibody test on impression smears of brain is the standard test
- Impression smears made of each of the desired sites within the brain
- Impression smears stained with antibody against the rabies virus
- Slides read under a fluorescent microscope


















